

CLAIM AMENDMENTS:

Claim 1 (Currently Amended): A sealing device, comprising:

a sealing member brought into contact with a contact surface so as to be slidable in a predetermined sliding direction,

the sealing member comprising

a sliding contact portion ~~containing a high polymer material~~ to be brought into sliding contact with the contact surface, and

a plurality of recessed or protruding streaks, which are independent of one another, provided side by side in an array so as to constitute a plurality of columns, and a plurality of rows on a surface of the sliding contact portion, wherein each streak is bordered along its entire circumference by the surface of the sliding contact portion, so as to separate each streak from an adjacent streak by a space,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in the predetermined sliding direction,

the columns being spaced side by side in a perpendicular direction relative to the predetermined sliding direction to form the plurality of rows,

longitudinal directions of the recessed or protruding streaks of each of the rows being alternately inclined in opposite directions relative to the predetermined

sliding direction, and

the recessed or protruding streaks of each respective row being inclined in same directions relative to the predetermined sliding direction.

Claim 2 (Withdrawn): The sealing device according to claim 1, wherein the sliding contact portion includes an annular seal lip rotated relative to the contact surface.

Claim 3 (Withdrawn): The sealing device according to claim 2, wherein the sealing member is brought into sliding contact with an outer peripheral surface of a rotating member.

Claim 4 (Original): The sealing device according to claim 1, wherein the sliding contact portion includes an annular seal lip axially moved relative to the contact surface.

Claim 5 (Previously presented): The sealing device according to claim 4, wherein the sealing member is brought into sliding contact with a peripheral surface of a linear reciprocating member.

Claim 6 (Original): The sealing device according to claim 1, further comprising

an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber, there being provided a plurality of sealing members, the plurality of sealing members including inner and outer sealing members provided in the annular piston.

Claim 7 (Previously presented): The sealing device according to claim 6, wherein the annular accommodation chamber is formed between an inner cylinder and an outer cylinder in a housing, and

an outer peripheral surface of the inner cylinder and an inner peripheral surface of the outer cylinder are respectively provided with contact surfaces respectively corresponding to the inner and outer sealing members.

Claim 8 (Original): The sealing device according to claim 6, further comprising

an annular partition plate for defining an annular back pressure chamber for applying back pressure to the annular piston,

the plurality of sealing members including an annular sealing member provided on at least the outer periphery of the partition plate.

Claim 9 (Original): The sealing device according to claim 8, wherein the annular piston comprises an inner cylinder, an outer cylinder, and an annular end

wall for connecting respective one ends of the inner cylinder and the outer cylinder,

an inner peripheral surface of the outer cylinder being provided with a contact surface corresponding to the annular sealing member provided on the outer periphery of the partition plate.

Claim 10 (Original): The sealing device according to claim 6, wherein the annular piston includes a piston for operating a clutch in an automatic transmission of an automobile.

Claim 11 (Canceled).

Claim 12 (Withdrawn): The sealing device according to claim 1, wherein the recessed or protruding streaks constituting the adjacent columns are alternately arranged.

Claim 13 (Withdrawn): The sealing device according to claim 2, wherein the recessed or protruding streaks constituting the column are inclined along the circumference of the annular seal lip.

Claim 14 (Withdrawn): The sealing device according to claim 13, wherein the recessed or protruding streaks constituting the column are alternately inclined in opposite directions.

Claim 15 (Currently Amended): The sealing device according to claim 1, wherein the sliding contact portion is comprised of a high polymer material including ~~includes~~ rubber or synthetic resin.

Claim 16 (Currently Amended): A sliding member brought into contact with a contact surface so as to be slidable in a predetermined sliding direction, comprising:

a sliding contact portion containing a high polymer material to be brought into sliding contact with the contact surface; and

a plurality of recessed or protruding streaks, which are independent of one another, provided side by side in an array so as to constitute a plurality of columns, and a plurality of rows on a surface of the sliding contact portion, wherein each streak is bordered along its entire circumference by the surface of the sliding contact portion, so as to separate each streak from an adjacent streak by a space,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in the predetermined sliding direction,

the columns being spaced side by side in a perpendicular direction relative to the predetermined sliding direction to form the plurality of rows,

longitudinal directions of the recessed or protruding streaks of each of the rows being alternately inclined in opposite directions relative to the predetermined sliding direction, and

the recessed or protruding streaks of each respective row being inclined in same directions relative to the predetermined sliding direction.

Claim 17 (Canceled).

Claim 18 (Original): The sliding member according to claim 16, wherein the high polymer material includes rubber or synthetic resin.

Claim 19 (Previously presented): The sealing device according to claim 1, wherein each streak is elongated and has a length and a width, with the length being greater than the width.

Claim 20 (Canceled).

Claim 21 (Previously presented): The sliding member according to claim 16, wherein each streak is elongated and has a length and a width, with the length being greater than the width.

Claim 22 (Canceled).

Claim 23 (New): A sealing device comprising:

a sealing member brought into contact with a contact surface so as to be slidable in a predetermined sliding direction,

the sealing member comprising

a sliding contact portion to be brought into sliding contact with the contact surface, and

a plurality of recessed or protruding streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the sliding contact portion, wherein each streak is bordered along its entire circumference by the surface of the sliding contact portion, so as to separate each streak from adjacent streak by a space,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in the predetermined sliding direction,

the columns being spaced side by side in a perpendicular direction relative to the predetermined sliding direction, and

a line extended in a longitudinal direction of each of the recessed or protruding streaks of each of the columns traversing a corresponding recessed or protruding streak of the adjacent columns so as to intersect a line in a longitudinal direction of the corresponding recessed or protruding streak.

Claim 24 (New): A sliding member brought into contact with a contact surface so as to be slidable in a predetermined sliding direction, comprising:

a sliding contact portion containing a high polymer material to be brought into sliding contact with the contact surface; and

a plurality of recessed or protruding streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the sliding contact portion, wherein each streak is bordered along its entire circumference by the surface of the sliding contact portion, so as to separate each streak from adjacent streak by a space,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in the predetermined sliding direction,

the columns being spaced side by side in a perpendicular direction relative to the predetermined sliding direction, and

a line extended in a longitudinal direction of each of the recessed or protruding streaks of each of the columns traversing a corresponding recessed or protruding streak of the adjacent columns so as to intersect a line in a longitudinal direction of the corresponding recessed or protruding streak.

Claim 25 (New): The sealing device according to claim 1, wherein the sliding contact portion includes an annular sliding contact portion,

the annular sliding contact portion is relatively rotatable with respect to the counter part member, and

the predetermined sliding direction comprises a circumferential direction of the annular sliding contact portion.

Claim 26 (New): The sealing device according to claim 1, wherein the sliding contact portion includes an annular sliding contact portion,

the annular sliding contact portion is relatively movable with respect to the counter part member, and

the predetermined sliding direction comprises an axial direction of the annular sliding contact portion.

Claim 27 (New): The sealing device according to claim 23, wherein the sliding contact portion includes an annular sliding contact portion,
the annular sliding contact portion is relatively rotatable with respect to the counter part member, and
the predetermined sliding direction comprises a circumferential direction of the annular sliding contact portion.

Claim 28 (New): The sealing device according to claim 23, wherein the sliding contact portion includes an annular sliding contact portion,
the annular sliding contact portion is relatively movable with respect to the counter part member, and
the predetermined sliding direction comprises an axial direction of the annular sliding contact portion.

Claim 29 (New): The sealing device according to claim 28, wherein the sealing member is brought into sliding contact with a peripheral surface of a linear reciprocating member.

Claim 30 (New): A sealing device comprising:
an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and
a plurality of sealing members,

the plurality of sealing members including inner and outer sealing members provided in the annular piston,

each of the inner and outer sealing members including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a peripheral surfaces of the annular accommodation chamber,

a plurality of streaks, which are independent of one another, being provided side by side so as to constitute a plurality of columns on a surface of the annular seal lip of at least one of the inner and outer sealing members,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in a circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip,

the recessed or protruding streaks which are adjacent to each other in the circumferential direction of the annular seal lip being alternately inclined in opposite directions in the circumferential direction of the annular seal lip, and

the recessed or protruding streaks which are adjacent to each other in the axial direction of the annular seal lip being inclined in same directions in the circumferential direction of the annular seal lip.

Claim 31 (New): The sealing device of claim 30, further comprising an annular partition plate for defining an annular back pressure chamber for applying back pressure to the annular piston,

the plurality of sealing members including an annular sealing member provided on at least the outer periphery of the partition plate,

the annular sealing member provided on the at least the outer periphery of the partition plate including an annular sliding contact portion which form a second annular seal lip and is brought into sliding contact with a corresponding peripheral surface of the annular piston,

a plurality of streaks, which are independent of one another, being provided side by side so as to constitute a plurality of columns on a surface of the second annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in a circumferential direction of the second annular seal lip,

the columns being spaced side by side in an axial direction of the second annular seal lip,

the recessed or protruding streaks which are adjacent to each other in the circumferential direction of the second annular seal lip being alternately inclined in opposite directions in the circumferential direction of the second annular seal lip,

and

the recessed or protruding streaks which are adjacent to each other in the axial direction of the second annular seal lip being inclined in same directions relative to the circumferential direction of the second annular seal lip.

Claim 32 (New): A sealing device comprising:

an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and a sealing member being provided in the annular piston,

the sealing member including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a predetermined peripheral surface of the annular accommodation chamber, and a plurality of streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in a circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip,

a longitudinal direction of each of the recessed or protruding streaks

being in the circumferential direction of the annular seal lip,

a transverse direction of each of the recessed or protruding streaks

being in the axial direction of the annular seal lip,

a length in the longitudinal direction of each of the recessed or protruding streaks being in a range of 100 to 500 μm , and

a length in the transverse direction of each of the recessed or protruding streaks being in a range of 50 to 200 μm .

Claim 33 (New): A sealing device comprising:

an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and a plurality of sealing members,

the plurality of sealing members including an inner and outer sealing members being provided in the annular piston,

each of the inner and outer sealing member including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a peripheral surface of the annular accommodation chamber,

a plurality of streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the annular seal lip at least one of the inner and outer sealing members,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in a circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip,

a longitudinal direction of each of the recessed or S protruding streaks being in the circumferential direction of the annular seal lip,

a transverse direction of each of the recessed or protruding streaks being in the axial direction of the annular seal lip,

a length in the longitudinal direction of each of the recessed or protruding streaks being in a range of 100 to 500 μm , and

a length in the transverse direction of each of the recessed or protruding streaks being in a range of 50 to 200 μm .

Claim 34 (New): The sealing device of claim 33, wherein

the recessed or protruding streaks constituting the adjacent columns are alternately arranged.

Claim 35 (New): The sealing device of claim 33, further comprising
an annular partition plate for defining an annular back pressure chamber for
applying back pressure to the annular piston,

the plurality of sealing members including an annular sealing member
provided on at least the outer periphery of the partition plate,

the annular sealing member provided on the at least outer periphery of the
partition plate including an annular sliding contact portion which forms a second
annular seal lip and is brought into sliding contact with a peripheral surface of the
annular piston,

a plurality of streaks, which are independent of one another, being provided
side by side so as to constitute a plurality of columns on a surface of the second
annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a
hydraulic fluid is stored or a plurality of protruding streaks around which the
hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced
side by side in a circumferential direction of the second annular seal lip,

the columns being spaced side by side in an axial direction of the second
annular seal lip,

the recessed or protruding streaks which are adjacent to each other in the
circumferential direction of the second annular seal lip being alternately inclined in
opposite directions in the circumferential direction of the second annular seal lip,

the recessed or protruding streaks which are adjacent to each other in the axial direction of the second annular seal lip being inclined in same directions relative to the circumferential direction of the second annular seal lip,

a length in the longitudinal direction of each of the recessed or protruding streaks being in a range of 100 to 500 μm , and

a length in the transverse direction of each of the recessed or protruding streaks being in a range of 50 to 200 μm .

Claim 36 (New): The sealing device of claim 35, wherein
the recessed or protruding streaks constituting the adjacent columns on the surface of the second annular seal lip are alternately arranged.

Claim 37 (New): A sealing device comprising:
an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and
a sealing member being provided in the annular piston,
the sealing member including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a predetermined peripheral surface of the annular accommodation chamber, and a plurality of streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

the recessed or protruding streaks of each of the columns being spaced side by side in a circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip,

a longitudinal direction of each of the recessed or protruding streaks being in the circumferential direction of the annular seal lip.

Claim 38 (New): A sealing device comprising:

an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and
a sealing member being provided in the annular piston,

the sealing member including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a predetermined peripheral surface of the annular accommodation chamber, and a plurality of streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

a longitudinal direction of each of the recessed or protruding streaks being inclined in a circumferential direction of the annular seal lip,

the recessed or protruding streaks of each of the columns being spaced side by side in the circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip, and

a line extended in the longitudinal direction of each of the recessed or protruding streaks of each of the columns traversing a corresponding recessed or protruding streak of the adjacent columns so as to intersect a line in a longitudinal direction of the corresponding recessed or protruding streak.

Claim 39 (New): A sealing device comprising:

an annular piston accommodated in an annular accommodation chamber for defining an annular fluid chamber in the annular accommodation chamber; and
a plurality of sealing members,

the plurality of sealing members including an inner and outer sealing members being provided in the annular piston,

each of the inner and outer sealing member including an annular sliding contact portion which forms an annular seal lip and is brought into sliding contact with a peripheral surface of the annular accommodation chamber,

a plurality of streaks, which are independent of one another, provided side by side so as to constitute a plurality of columns on a surface of the

annular seal lip at least one of the inner and outer sealing members,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

each of the recessed or protruding streaks being inclined in a circumferential direction of the annular seal lip,

the recessed or protruding streaks of each of the columns being spaced side by side in the circumferential direction of the annular seal lip,

the columns being spaced side by side in an axial direction of the annular seal lip, and

a line extended in the longitudinal direction of each of the recessed or protruding streaks of each of the columns traversing a corresponding recessed or protruding streak of the adjacent columns so as to intersect a line in a longitudinal direction of the corresponding recessed or protruding streak.

Claim 40 (New): The sealing device of claim 39, further comprising an annular partition plate for defining an annular back pressure chamber for applying back pressure to the annular piston,

the plurality of sealing members including an annular sealing member provided on at least the outer periphery of the partition plate,

the annular sealing member provided on the at least outer periphery of the partition plate including an annular sliding contact portion which forms a second

annular seal lip and is brought into sliding contact with a peripheral surface of the annular piston,

a plurality of streaks, which are independent of one another, being provided side by side so as to constitute a plurality of columns on a surface of the second annular seal lip,

the plurality of streaks including a plurality of recessed streaks in which a hydraulic fluid is stored or a plurality of protruding streaks around which the hydraulic fluid is stored,

a longitudinal direction of each of the recessed or protruding streaks on the second annular seal lip being inclined in a circumferential direction of the second annular seal lip,

the recessed or protruding streaks of each of the columns being spaced side by side in the circumferential direction of the second annular seal lip,

the columns being spaced side by side in an axial direction of the second annular seal lip, and

a line extended in the longitudinal direction of each of the recessed or protruding streaks of each of the columns traversing a corresponding recessed or protruding streak of the adjacent columns so as to intersect a line in a longitudinal direction of the corresponding recessed or protruding streak.